

Chapter 14

Firefighting Equipment

The Service Fire Management Handbook incorporates, by reference, all guidance in the [Interagency Standards for Fire and Fire Aviation Operations](#) (Redbook, NFES #2724) Chapter 14 in addition to the following Service specific clarifications:

Fire Vehicle Color and Striping National Standards

The Service adopted National standards for fire vehicle color and striping for wildland fire vehicles. New wildland fire engine acquisitions must conform to the color and striping standards. Compliance with the following standards are optional for all non-engine vehicles but are identified should the station desire to apply the standard to the fire fleet beyond the fire engine requirements.

Engines (*Light Class Trucks and other Wildland Fire Passenger Vehicles optional*)

Color

- Chassis shall be painted by the original equipment manufacturer with an automotive acrylic urethane or polyurethane paint and Oxford White in Color.
- Metal parts that are painted shall be gloss black acrylic automotive grade enamel.
- Items that are powder coated shall have a minimum 1-2 mm flat black powder coated finish.
- Blue lettering shall be Oralite 050 Blue or equivalent.
- Safety-yellow/green striping shall be (Red 204, Green 255, Blue 51 printed on white reflective and laminated), or equivalent in color.

Striping and Vehicle Identification

- All stripes shall meet NFPA 1906 (current edition) standards and American Society for Testing and Materials (ASTM) D 4965 Standard Specifications for Retro-reflective sheeting for Traffic Control. Finish of the striping, numbering and emblems shall be void of air pockets or blemishes, and edges shall be smooth.
- All lettering and numbering shall be reflective in nature and conform to the minimum requirements of ASTM D 4956, Standard Specification for reflective Sheeting for Traffic Control, Type I, Class 1 or Class 3.
- All applicable signs, plates and labels listed in NFPA 1906 Standard for Wildland Fire Apparatus current edition are required. They shall be permanent in nature and securely attached and shall meet the

- 1 requirements of NFPA 1906 current edition and UL 969, Standard for
2 Marking and Labeling System. Additionally they shall have resistance
3 to damage from temperatures between -30°F and 176°F and exposure
4 to oil, fuel, water, hydraulic fluids or other fluids used in wildland
5 firefighting.
- 6 • Service vehicles shall be equipped with bold block italicized blue
7 lettering ranging in size from 3.5- 12 inches with a variety of numbers
8 and identifiers located on the doors (15ea, 3.5 inch character),
9 apparatus body sides (8 ea., 4inch characters), front (8 ea., 4 inch
10 characters), rear (4 ea., 4 inch characters), and Top-non italicized (4
11 ea., 12 inch characters). Additionally, FIRE in 4 inch bold block
12 italicized blue letters; one (1) on each side (integrated within in the 4
13 inch safety yellow reflective stripe, located at the rear of the apparatus
14 body, driver side and passenger side.), one (1) on the front, and one
15 (1) on the upper rear-facing driver side of the package. Numbers shall
16 not be placed in an area that reduces visibility; across door seams or
17 reflectors and lights (16 total characters).
 - 18 • A 4 inch white stripe shall be positioned at the front of the apparatus
19 on the wings of the bumper. Within the 4 inch white reflective stripe,
20 3.5 inch blue Block Bold italicized reflective numbers placed on each
21 end of the front bumper. Numbers shall be centered horizontally and
22 read left to right.
 - 23 • Service units shall have a 4 inch safety-yellow/green stripe positioned
24 on the sides of the body and cab.
 - 25 • Each vehicle shall have 4 inch blue Block Bold italicized reflective
26 numbers placed within, (or above) the striping above the front fenders
27 (example 2425). Numbers shall not be placed in an area that reduces
28 visibility, across door seams or reflectors and lights.
 - 29 • The Service shield will be 12 inches in height and shall be placed on
30 each front door, centered left to right, integrated with any striping.
31 Centered at the bottom of the shield shall be the State and Unit
32 identifier in 3.5 inch blue Block Bold italicized reflective lettering
33 (example AZ-BAR). The lettering "U.S. Fish & Wildlife Service"
34 shall be centered above emblem in approximately 1.5 inch (sized to be
35 equal to the width of the lower door) blue italicized reflective
36 lettering.
- 37 (Engines and Crew Vehicles Only)
- 38 • Red and fluorescent yellow reflective chevron striping (6" color
39 swatch width) shall be installed. The striping shall be placed on the
40 vertical rear facing surfaces of the rear bumper in a chevron pattern
41 sloping downward and away from the centerline of the vehicle at an
42 angle of 45 degrees to form a combined width of 4 inches.

- Installation of red/white reflector DOT stripe inside all vertical doors, chassis and apparatus body shall be installed.
- If applicable body style, each compartment shall have 1.5 inch vinyl label located on the lower rear corner of the compartment door. The compartment labeling scheme for the driver side compartments shall be, D1 through D3 starting from the front of the apparatus body working toward the rear, top to bottom. The compartment lettering scheme shall be, for the passenger side compartments shall be P1 through P3 starting from the front of the apparatus body working toward the rear, top to bottom.

Engine Inventories

An inventory of supplies and equipment carried on each vehicle is required to maintain accountability and to obtain replacement items lost or damaged on incidents. The standard inventory for FWS engines is found in Table 14-1 Normal Unit Strength (NUS) Engines below.

The following Table shows the NUS minimum stocking levels required for FWS engines.

Table 14-1- Normal Unit Strength (NUS) Engines

Category	Item Description	NFES #	Type 3,4,5	Type 6
Fire Tools ¹ and Equipment	McLeod	0296	1	
	Combination Tool	1180	1	1
	Shovel	0171	3	2
	Pulaski	0146	3	2
	Backpack Pump	1149	3	2
	Fusees (case)	0105	1	½
	Foam, concentrate, Class A (5-gallon)	1145	1	1
	Chainsaw (and chaps)		1	1
	Chainsaw Tool Kit	0342	1	1
	Drip Torch	0241	2	1
	Portable Pump		*	*
Medical	First Aid Kit, 20-25 person	1143	1	1
	Burn Kit		1	1
	Body Fluids Barrier Kit	0640	1	1
General Supplies	Flashlight, general service	0069	1	1
	Chock Blocks		1	1
	Tow Chain or Cable	1856	1	1

Category	Item Description	NFES #	Type 3,4,5	Type 6
	Jack, hydraulic (comply w/GVW)		1	1
	Lug Wrench		1	1
	Pliers, fence		1	1
	Food (48-hour supply)	1842	1	1
	Rags	3309	*	*
	Rope/Cord (feet)		50	50
	Sheeting, plastic, 10' x 20'	1287	1	1
	Tape, duct	0071	1	1
	Tape, filament (roll)	0222	2	2
	Water (gallon/person) minimum		2	2
	Bolt Cutters		1	1
	Toilet Paper (roll)	0142	*	*
	Cooler or Ice Chest	0557	*	*
	Hand Primer, Mark III	0145	*	*
	Hose Clamp	0046	2	1
	Gaskets (set)		1	1
	Pail, collapsible	0141	1	1
	Hose Reel Crank		*	*
Safety	Fire Extinguisher (5 lb)	2143	1	1
	Flagging, Pink (roll)	0566	*	*
	Flagging, Yellow w/Black Stripes (roll)	0267	*	*
	Fuel Safety Can (Type 2 OSHA, metal, 5-gallon)	1291	*	*
	Reflector Set		*	*
	Class 2 or 3 High Visibility Apparel (1 per seat belt)	1242	**	**
Vehicle and Pump Support	General Tool Kit (5180-00-177-7033/GSA)		1	1
	Oil, automotive, quart		4	2
	Oil, penetrating, can		1	1
	Oil, automatic transmission, quart		1	1
	Brake Fluid, pint		1	1
	Filter, gas		1	1
	Fan Belts		1	1

Category	Item Description	NFES #	Type	Type
			3,4,5	6
	Spark Plugs		1	1
	Hose, air compressor w/adapters		1	0
	Fuses (set)		1	1
	Tire Pressure Gauge		1	1
	Jumper Cables		1	1
	Battery Terminal Cleaner		*	*
	Tape, electrical, plastic	0619	1	1
	Tape, Teflon		1	1
Personal Gear (Extra Supply)	File, mill, bastard	0060	*	*
	Head Lamp	0713	1	1
	Hard Hat	0109	1	1
	Goggles	1024	2	2
	Gloves		*	*
	First Aid Kit, individual	0067	1	1
	Fire Shirt		*	*
	Fire Shelter w/case and liner	0169	2	1
	Packsack	0744	2	1
	Batteries, headlamp (pkg)	0030	6	4
	Ear Plugs (pair)	1027	3	3
Radio	Portable		1	1
	Mobile		1	1
	Batteries (for portable radio)		2	2
Hose	Booster (feet/reel)	1220	100	100
	Suction (length, 8' or 10')		2	2
	1" NPSH (feet)	0966	300	300
	1½" NH (feet)	0967	300	300
	¾" NH, garden (feet)	1016	300	300
	1½" NH, engine protection (feet)		20	20
	1½" NH, refill (feet)		15	15
Nozzle	Forester, 1" NPSH	0024	3	2
	Adjustable, 1" NPSH	0138	4	2
	Adjustable, 1½" NH	0137	5	3
	Adjustable, ¾" NH	0136	4	2

Category	Item Description	NFES #	Type	Type
			3,4,5	6
	Foam, ¾" NH	0627	1	1
	Foam 1½" NH	0628	1	1
	Mopup Wand	0720	2	1
	Tip, Mopup Wand	0735	4	2
	Tip, Forester, Nozzle, fog	0903	*	*
	Tip, Forester Nozzle, straight stream	0638	*	*
Wye	1" NPSH, Two-Way, Gated	0259	2	1
	1½" NH, Two-Way, Gated	0231	4	2
	¾" NH w/Ball Valve, Gated	0739	6	4
Adapter	1" NPSH-F to 1" HN-M	0003	*	*
	1" NH-F to 1" NPSH-M	0004	1	1
	1½" NPSH-F to 1 ½" NH-M	0007	1	1
	1½" NH-F to 1 ½" NPSH-M	0006	*	*
Increaser	¾" NH-F to 1" NPSH-M	2235	1	1
	1" NPSH-F to 1 ½" NH-M	0416	2	1
Coupling	1" NPSH, Double Female	0710	1	1
	1" NPSH, Double Male	0916	1	1
	1½" NH, Double Female	0857	2	2
	1½" NH, Double Male	0856	1	1
Reducer/ Adapter	1" NPSH-F to ¾" NH-M	0733	3	3
	1½" NH-F to 1 NPSH-M	0010	6	4
	2" NPSH-F to 1 ½" NH-M	0417	*	*
	2½" NPSH-F to 1 ½" NH-M	2229	*	*
Reducer	1½" NH-F to 1" NH-M	0009	1	1
	2½" NH-F to 1 ½" NH-M	2230	1	1
Tee	1" NPSH-F x 1" NPSH-M x 1" NPSH-M, w/cap	2240	2	2
	1½" NH-F x 1 ½" NH-M x 1" NPSH-M w/cap	0731	2	2
	1½" NH-F x 1 ½" NH-M x 1" NPSH-M w/valve	0230	2	2
Valve	1½" NH-F, Automatic Check and Bleeder	0228	1	1
	¾" NH, Shut Off	0738	5	5
	1" Shut Off	1201	1	1

Category	Item Description	NFES #	Type	Type
			3,4,5	6
	1½" Shut Off	1207	1	1
	Foot, w/strainer		1	1
Injector	1" NPSH x 1/12" NH, Jet Refill	7429	*	*
Wrench	Hydrant, adjustable, 8"	0688	1	1
	Spanner, 5", 1" to 1½" hose size	0234	4	1
	Spanner, 11", 1½" to 2 ½" hose size	0235	2	2
	Pipe, 14"	0934	1	1
	Pipe, 20"		1	1
Engine	<i>Wildland Fire Incident Management Field Guide (PMS 210)</i>	2943	1	1
	GPS Unit		1	1
	Belt Weather Kit	1050	1	1
	Binoculars		1	1
	Map Case w/maps		1	1
	Inventory list		1	1
	<i>Current interagency Standards for Fire and Fire Aviation Operations</i>		1	1

*No minimums – carried by engines as an option, within weight limitations

** One per seat belt

¹ A minimum of eight tools for type 3, 4, 5 engines and a minimum of five tools for type 6 engines is required. The listed numbers of tools in each box are required to be on the engine. Beyond that, the tools listed as optional or additional required tools can make up the rest of the minimum number required for engines.